

# W5YI

## America's Oldest Ham Radio Newsletter REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable.

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### FCC Seeks to Streamline its Procedures and Regulations

#### Top-to-Bottom Biennial Rules Review Includes Ham Radio Initiative

The FCC has released a list of 31 proposed initiatives to be explored as part of the 1998 biennial regulatory review. The review is aimed at eliminating or modifying regulations that are overly burdensome or no longer serve the public interest. The Communications Act requires the FCC to review all of its regulations applicable to its licensees in every even-numbered year to determine whether certain rules are no longer necessary.

One of the initiatives listed in the working document released on February 5, 1998, concerns the Amateur Service. The FCC said that it was looking toward streamlining the Part 97 Amateur Radio Service and that it would "Seek comment on amending Parts 0, 1, and 97 of FCC Rules to privatize further the administration of the Amateur Radio Services and to simplify the licensing process."

We asked an official at the FCC's Wireless Telecommunications Bureau (WTB) for further information on this proceeding and was told that any comment at this point would be premature. One can only speculate on the details of the initiative that applies to the Amateur Service.

Part 0, Title 47 (Telecommunication) of the *Code of Federal Regulations* concerns the "Commission Organization" including the authority delegated to each FCC bureau. Section §0.131 delegates "all matters pertaining to licensing..." to the Wireless Telecommunication Bureau. Section §0.483 simply says that all "Application filing procedures for amateur radio operator licenses are set forth in Part 97..." Part 1 covers FCC "Practice and

Procedure." Section §1.912 requires all applications requiring a license examination to be submitted to volunteer examiners (VEs). All other applications must be submitted to the FCC in Gettysburg, PA.

The 1998 Biennial Review of FCC Regulations actually began last fall when FCC Chairman William E. Kennard appointed Deputy General Counsel David H. Solomon to coordinate the review with assistance from Senior Managers from each of the FCC's Bureaus and Offices. In announcing early commencement of the 1998 biennial review, Kennard said, "The first biennial review is a key time for the Commission to take a serious top-to-bottom look at its rules."

In a November 18<sup>th</sup> press release, the FCC said "The Bureau/Office proposals will be presented to the Commission for consideration this winter and next Spring, with proposals for final action to be presented to the Commission next summer and fall."

Toward that end, the Wireless Telecommunication Bureau held a public forum to discuss the biennial review on January 21, 1998. It focused on "...(1) streamlining WTB data collection processes and application information; (2) modification of licensing rules to permit increased operational flexibility; to promote technical innovation; to develop workable sharing criteria, and to clarify the Commission's role in facilitating coordination among licensees...."

The FCC said that beginning February 9, 1998, members of the public may send their suggestions regarding any proposed rule changes via e-mail to the following address: [biennial@fcc.gov](mailto:biennial@fcc.gov).

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## "HAMS" TO CHASE "FOXES" IN LATE APRIL

A ham radio magazine is urging amateur radio clubs and operators across America to go "foxhunting" on the last weekend in April. But the bushy-tailed animals have nothing to fear. Hams, after all, are not hounds, and in ham radio lingo, a "foxhunt" is one of several names for Amateur Radio Direction Finding (ARDF), a competition to locate a hidden radio transmitter.

"CQ VHF" magazine has designated April 25-26, 1998 as "National Foxhunting Weekend," and is encouraging ham operators and radio clubs to conduct a hidden transmitter hunt at that time. Unlike traditional ham radio contests, there are no standardized rules, log sheets or reporting forms.

"It's not a national contest, and there are no set rules," writes radio foxhunting veteran Joe Moell, K0OV in an article announcing the event in the upcoming April issue of "CQ VHF". "It's just a time for clubs, schools and Scout groups to try this exciting radiosport." Moell notes that participation is not limited to licensed hams. "There is no license requirement to receive, so everyone can participate."

On-air competition is a ham radio tradition dating back nearly to the birth of the hobby, and foxhunting has been part of that tradition for at least 60 years. Foxhunting may be done by car or on foot, and the magazine is encouraging ham groups to use either one or both during the National Foxhunting Weekend. And there's more than a fun day of friendly competition involved.

"Foxhunting is certainly fun and a competitive challenge," says "CQ VHF" Editor Rich Moseson (W2VU), "but it also teaches important direction-finding skills that may be called upon in searching for a downed airplane or lost hiker using an Emergency Locator Transmitter, or for tracking down sources of interference."

"Transmitter hunting belongs in the mainstream of amateur radio," adds Moell. "Ham radio direction finding can be used for public service and to save lives." In January, the American Radio Relay League approved the appointment of a national ARRL ARDF Coordinator to encourage activity.

Groups participating in the "CQ VHF" National Foxhunting Weekend are encouraged to send reports of their activity directly to Joe Moell, K0OV, at P.O. Box 2508, Fullerton, CA 92837, or to the following e-mail address: <homingin@aol.com>. E-mail reports may also be sent directly to the magazine at <cqvhf@aol.com>

"CQ VHF" is a monthly magazine dedicated to "Ham Radio Above 50 MHz." It is published by CQ Communications, Inc., which also publishes "CQ Amateur Radio," and several other radio hobby publications. CQ Communications is based in Hicksville, New York.

## GUEST EDITORIAL ON AMATEUR STATISTICS

The following guest editorial was submitted to us at

our request by Joe Speroni, AH0A - an Extra Class amateur who lives now in Hawaii. We contacted Joe, because his website had U.S. licensing figures on it which differed from those distributed by the FCC.

For example, the amateur census that appears on the FCC database for December 1997 - and those calculated by AH0A are as follows: We asked him for an explanation. Here is his story. The thoughts and conclusions are his own.

U.S. Amateur Licensing Statistics

Lic. Class	FCC	%/Total	AH0A	%/Total
Extra	75694	10.5%	73949	10.9%
Advanced	112482	15.7%	105835	15.6%
General	124415	17.3%	114877	17.0%
Tech Plus	147559	20.5%	137688	20.4%
Technician	179226	24.9%	179988	26.6%
Novice	79965	9.3%	64169	9.5%
<b>TOTAL:</b>	<b>719331</b>	<b>100%</b>	<b>676506</b>	<b>100%</b>

## Amateur Radio Statistics

Beginning in June 1997 the author, AH0A, started downloading the FCC Amateur Radio Service database with the intent of trying to understand growth trends in the service. There are only eight months of data available on the web site <http://www.speroni.com/AH0A/>, so we should be careful not to jump to conclusions. It's perhaps too easy to find justification in statistics for previously held opinions.

One comment about the source of the data presented in this report: it is produced from monthly downloads of FCC data. The structure of the FCC database is such that it is an instantaneous look at the data. As new 610's are processed they overlay previous license changes and history is lost. Past data can be estimated, but the accuracy decreases the further back you look.

The *W5YI Report* has been reprinting FCC data for many years. Although the data is correct, assumptions are made in many publications regarding its interpretation. First of all, the data shows all current licenses, plus those in the two-year grace period after expiration. These numbers overstate the total number of active hams, and there is little analysis of data on new licenses, upgrades, and expirations: information that would be useful in looking for trends. The latest FCC data published in the *W5YI Report* combines Tech and Tech+ numbers, making comparisons of Morse and non-Morse licensing difficult.

Using the monthly FCC database dumps, AH0A has developed an interesting foundation for expanded statistics. Comparative data from Japan is also provided, although differences in the licensing systems complicate direct comparisons. Still the rapid growth of the JA numbers is interesting and maybe applicable in some way to the U.S. situation.

Let's look at the number of current licenses for eight months (208 days from July 1, 1997 to Jan 25, 1998), and compute the annualized growth by license class:

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MONTH	EXTRA	ADVANCED	GENERAL	TECH+	TECH	NOVICE	TOTAL
Jun 97	73,737	107,024	116,629	139,608	174,925	66,551	678,473
Jul 97	73,749	106,877	116,352	139,238	176,355	66,162	678,733
Aug 97	73,804	106,668	116,079	138,900	176,960	65,909	678,320
Sep 97	73,794	106,304	115,639	138,339	177,547	65,372	676,995
Oct 97	73,915	106,207	115,460	138,078	178,335	65,142	677,137
Nov 97	73,939	106,123	115,280	138,064	179,240	64,868	677,514
Dec 97	73,949	105,835	114,877	137,688	179,988	64,169	676,506
Jan 98	74,048	105,814	114,811	137,656	180,608	63,916	676,853
<b>Jun-97:Dec-98</b>							
<b>Annualized Growth</b>	<b>+.74%</b>	<b>-2.01%</b>	<b>-2.78%</b>	<b>-2.49%</b>	<b>+5.52%</b>	<b>-7.23%</b>	<b>-0.42%</b>

Table 1 - U.S. Amateur Radio Statistics by License Class

On the surface it might appear that the Amateur Radio Service is declining slightly, and that the Tech class is growing rapidly. Let's break down the growth rate data into components - (1) Expirations, (2) New Licenses,

(3) Grace Period Renewals (really an entirely new license once expiration has been recorded), and other FCC administrative actions, (4) Upgrades to higher classes, and (5) Upgrades from lower classes.

	EXTRA	ADVANCED	GENERAL	TECH+	TECH	NOVICE	TOTAL
Hams as of 1/20/98	74,048	105,814	114,811	137,656	180,608	63,916	676,853
(1.) Expirations	-2.43%	-4.12%	-5.41%	-5.48%	-0.01%	-8.98%	-3.79%
(2.) New Licenses	+0.04%	+0.03%	+0.15%	+0.86%	+6.89%	+0.95%	+2.09%
(3.) Grace period renewals, and other FCC actions	+0.82%	+1.37%	+1.58%	+2.10%	+0.39%	+1.97%	+1.29%
(4.) Upgrade To	+2.31%	+2.20%	+2.73%	+2.13%			+1.50%
(5.) Upgrade From		-1.48%	-1.82%	-2.13%	-1.56%	-1.18%	-1.50%
<b>Net Growth</b>	<b>+0.74%</b>	<b>-2.01%</b>	<b>-2.78%</b>	<b>-2.49%</b>	<b>+5.52%</b>	<b>-7.23%</b>	<b>-0.42%</b>

Table 2 - Growth Rates by License Class

These figures have been normalized as percentages of the number of each class' licensees to aid in making comparisons. The absolute numbers are available on the AHØA web site.

The first striking fact in the above data is that the Technician class has no expirations. Almost all 10-year Technician licenses were issued after March 1991, so there will be no expirations until March 2001. Note the lower expiration rates for successive higher-class licensees, indicating that higher class licensees tend to renew their licenses. It can be reasonably inferred that once Technician licenses start to expire, the attrition rate may well be higher than even the Tech+ class rate.

At the present rate of creation of new licensees, the Technician class will be shrinking rapidly by early 2002. Initially there will be no renewals from the pool of expired Technician licenses within the two-year grace period to offset the shrinkage. The decrease could be more pronounced.

Another interesting conclusion is that Technicians do upgrade. The -1.56% upgrade rate is lower than other

classes, but not by much, debunking the presumption that the Morse code requirement discourages upgrades.

There is pessimism in this data. Based on the last eight months of data, the Amateur Radio Service is shrinking, and this trend may well accelerate. Assuming the Amateur Radio Service wants or needs to expand at least at the rate of U.S. population growth, increased promotion and education are required. This important job falls on volunteers in the Amateur Radio community. Another approach, which we don't support and hope to demonstrate is self-defeating in the long term, would be to reduce licensing requirements. If numbers are the goal, a tongue-in-cheek solution would be to expand the VE program overseas since FCC regulations license anyone anywhere in the world. The trophy U.S. vanity call sign is sought after commodity. Many U.S. licenses have already been granted to non-resident aliens. Reducing licensing requirements and timely translation of the exams into foreign languages would do a lot to expand numbers.

The challenge to grow depends largely on future license expirations. To the extent that we have added

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hams that really have little interest in the hobby, we create a large backlog of licenses that will just expire after their ten-year life. This table shows the actual expirations in 1996-97, and the potential expirations for 1998 and there

after (data from the FCC database not shown on the AHØA web site). Beginning in 2001 the expirations will be difficult to offset with new Hams.

YEAR	EXTRA	ADVANCED	GENERAL	TECH+	TECH	NOVICE	TOTAL
1996	680	2,946	3,708	3,497	0	6,001	16,833
1997	1,351	3,866	5,870	6,456	0	9,130	26,674
1998	5,801	11,659	13,882	15,130	0	9,262	54,217
1999	4,006	5,692	6,243	13,274	0	7,513	36,739
2000	4,664	5,956	6,098	13,774	0	8,720	39,222
2001	5,183	6,179	6,402	12,934	17,410	7,255	55,363
2002	5,887	6,871	6,819	11,481	25,256	5,570	61,884
2003	8,331	10,364	9,395	11,530	31,391	4,623	75,634
2004	9,161	15,786	17,497	10,813	34,850	5,152	93,259
2005	6,180	12,571	14,648	14,043	26,518	5,188	79,148
2006	12,804	14,267	16,099	15,863	23,382	5,119	87,534

Table 3 - Current and Projected Maximum Expirations

The JA amateur radio licensing data may help to shed some light on the subject of what happens when licensing requirements are reduced. This data is published yearly by the Japanese Ministry of Telecommunication (MPT), the equivalent of our FCC.

Japan is known as having the largest ham popula-

tion in the world. One way this was done was by reducing licensing requirements and simplifying methods of administering examinations. The following data shows the results. As recent Asian and Japanese economic news shows early rapid growth is difficult to sustain.

YEAR	NEW OPERATORS (GROSS, NOT NET)	OPERATOR GROWTH	TOTAL STATIONS	NEW STATIONS	STATION GROWTH	JARL MEMBERS	NEW JARL MEMBERS	JARL GROWTH
88	137,015	33.00%	825,153	75,739	10.10%	143,626	2,759	2.00%
89	150,790	10.10%	916,904	91,751	11.10%	149,341	5,715	4.00%
90	165,405	9.70%	1,027,101	110,197	12.00%	159,460	10,119	6.80%
91	178,064	7.70%	1,101,431	74,330	7.20%	167,784	8,324	5.20%
92	178,318	0.10%	1,203,226	101,795	9.20%	177,276	9,492	5.70%
93	171,393	-3.90%	1,283,185	79,959	6.60%	185,387	8,111	4.60%
94	162,608	-5.10%	1,325,527	42,342	3.30%	193,945	8,558	4.60%
95	151,199	-7.00%	1,366,814	41,287	3.10%	182,563	-11,382	-5.90%
96	114,528	-24.30%	1,350,127	-16,687	-1.20%	168,880	-13,683	-7.50%
97	81,294	-29.00%	1,293,653	-56,474	-4.20%	156,210	-12,670	-7.50%

Table 4 - Japanese Amateur Radio License Statistics

Note that JA operator licenses are issued for life and the station license is for five-years. The Japanese MPT has no process to maintain the operator license database, even for death. If this process continues the total number of citizens holding Amateur Radio operator licenses will one day exceed the population of Japan. The number for operators is necessarily a gross calculation, not net after subtraction of expirations. The number of station licenses is a better measure of the state of Japanese Amateur Radio, but the numbers of new operators being licensed is a good measure of future growth.

Japanese stations license expirations are increasing. "Printing licenses" is no guarantee of sustained growth. Perhaps something acquired with little effort is treated as having little value, so there is no big loss if it expires.

Growing the Ham community faster than the U.S. population growth may not be a good goal. We have exceeded this growth rate during the past ten years, but

with many Hams who have lost interest in the Amateur Radio Service. The number who do not renew their licenses after expiration is increasing. Education and administration of testing is completely in the hands of the Amateur Radio community. We have limited resources, so concentrating on methods that generate loyal members of the service should become a priority. Churning large numbers of short-timers does not serve the hobby.

There are some very basic questions that nobody is asking about the Amateur Radio Service. Do we need to grow? Why? Do we believe having more numbers will help protect our frequencies? Do we need more frequencies now or to support future growth? Will we be better able to provide public service if we have more numbers? These questions and possible lessons from the Japanese experience could be the subject of future articles.

By: Joseph Speroni, AHØA

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## **INQUIRIES & COMPLAINTS TO FCC (or) What Is the public talking about?**

During the final six months of 1997, the FCC determined the Top 50 consumer telecommunications issues. The data was collected based on nearly half a million telephone contacts from the public to the FCC's National Call Center located in Gettysburg, PA.

NCC, the central clearing house for incoming consumer inquiries, is operated by the FCC's Compliance and Information Bureau. Their toll free number is: 1-888-CALL-FCC or 1-888-325-5322. (Note that the area code is 888 and not 800.)

**1) The number one issue was telephone "slamming."** This is the unauthorized switching of long distance telephone service. Callers are asked to file a complaint with the FCC's Common Carrier Bureau and to contact their local telephone company and place a "PIC freeze" on their account. This locks in the Primary Inter-exchange Carrier (PIC) of their choice and prevents an unauthorized change.

**2) The number two inquiry concerned the status of radio licenses,** grants and permits issued by the FCC's licensing facility in Gettysburg. Amateur radio operators in particular are interested in getting their call sign as soon as possible so they can get on the air. But many of the inquiries concern licenses in other radio services as well.

**3) Disputed telephone billing and service is the number three issue.** Most are complaints about charges for services not requested or telephone calls not made. Many callers complain about telephone service or calls made within their home state. Consumers are advised that intrastate calls are regulated by their state's Public Utility Commission or a similar agency in their state and not the FCC. Information is provided about how to contact the state agency.

**4) The number 4 consumer issue concerns the Telephone Consumer Protection Act of 1991.** Consumers are annoyed with numerous telemarketing calls and unsolicited fax messages and want to understand the law.

**5) How to obtain a Private Land Mobile (Business Band) Radio license** is the number 5 issue. The NCC provides information on eligibility, appropriate forms and fees and how to contact Frequency Coordinators.

**6) Interference complaints to tele-**

**vision reception ranks number 6.** Most are about broadcast TV reception, but some are about cable and satellite services.

**7) Many callers inquire whether they are still required to hold a radio station license for their recreational boat.** The NCC advises that the licensing requirements for most recreational stations have been eliminated. There are also many questions concerning requirements, qualifications and how to apply for an aircraft license.

**8) Callers with questions about telephone interference are advised** to contact the telephone manufacturer. A list of manufacturers is available by mail, fax or e-mail. Many inquiries are reports of interference to home entertainment equipment. Interference to television or radio reception from a nearby AM/FM broadcast station may constitute a violation of FCC rules. Callers are asked to provide specific information that is referred to the FCC field offices for investigation.

**9) How to become a ham radio operator** or to renew or modify an existing license is next. Prospective licensees are provided with information about obtaining an application Form 610 and how to contact an Amateur Volunteer Exam Coordinator. Information on reciprocal licensing arrangements with other countries and the new vanity call sign program is also available. In most cases, a callsign must be unassigned for two years before it is available for reassignment. Most on-line databases do not indicate the original date of assignment. The NCC can also provide information requirements, qualifications, and how to apply for a GMRS (General Mobile Radio Service) license.

**10) Many callers are upset about the methods used by telephone companies to solicit business.** The majority of these complaints concern telephone solicitations for switching long distance service.

## **OTHER ISSUES OF MAJOR CONCERN TO CALLERS INCLUDE:**

**Commercial Radio Operator Licensing:** ...especially the *Restricted Radiotelephone Operator's Permit (RP)* and the *General Radiotelephone Operator's License (GROL)* ...who needs it and how to get the required forms. Where an examination is required, NCC provides a list of COLEM's (Commercial Operator License Examination Managers).

**How to Obtain FCC Forms:** These are available from the FCC Forms Contractor

who can be reached at 202-418-FORM.

## **Operator Service Providers (OSP):**

NCC receives many complaints about rates charged at payphones and telephones in public places. Most callers are not aware that Federal rules allow customers to choose a long distance carrier when making calls from public phones. The *Telecommunication Reform Act* gives the FCC power to take control over pay telephone pricing from state regulators.

**Cable Service Complaints:** ...especially inability to contact their cable company, poor customer service and delays in making service calls. There are many complaints about rate increases, charges for equipment and changes in cable programming.

**CB Violations:** Callers complain about interference to television reception or telephones caused by a CB operator. Many CB operators also call to report violations on the CB channels.

**International Telephone Calls:** ...including 809 (Caribbean) area. Many complaints have been received from callers charged exorbitant rates for calls that were unknowingly placed to international locations. They may have responded to a pager or message and instructed to dial a number in the 809 area code. They are then billed for an international call at a rate much higher than expected. NCC can provide callers with information on how to resolve disputes about such calls.

**Questions about Telephone Charges on Bill:** ...especially the \$3.50 telephone subscriber line charge billed by local telephone companies to recover the cost of connecting individual phone lines to the interstate telephone network. NCC also receives many about the use of calling cards ...especially cards that have no long distance credit or did not have the amount of credit purchased.

**Broadcast Related issues:** ...including reports of indecent or obscene material or how to start a broadcast station. NCC has two bulletins that address these issues which can be forwarded to consumers. The NCC also receives many calls for information about broadcast programming rules on issues such as newscasts, loud commercials, free speech, talk shows, programming changes, etc. Information is provided on how to file a complaint with the Mass Media Bureau. The NCC receives many calls from people asking why the FCC will not allow them to receive local network broadcast programming on their satellite system. Callers are advised that Copyright law (not

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FCC rules) pursuant to the Satellite Home Viewer Act prevents their satellite provider from carrying local network broadcast stations.

**Telephone Harassment by Bill Collectors:** The practices of debt collectors on the telephone are subject to regulation by the Federal Trade Commission. Information on how to contact the FTC Regional Office is available from the NCC.

**Telephone Dial-a-Porn:** Hundreds of parents and other concerned citizens have contacted the NCC about the issue of Dial-A-Porn services, especially in relation to children. Many of these operate outside the United States beyond the reach of the U.S. Government. The NCC also receives inquiries and complaints about pay-per-call telephone services. Consumer bulletins on these matters are available from the National Call Center.

**Licensing Refunds, Duplicate Licenses:** Information is available on how to obtain a fee refund from the Wireless Telecommunications Bureau and how to obtain a duplicate license.

**How to Order a Copy of FCC Rules & specific Rule Questions:** Information is available from the Government Printing Office and ordering information is provided to the caller.

**Tower issues:** The NCC receives many calls about rules concerning tower markings, lighting and restrictions.

**Interference to Amateur Radio:** (according to the NCC) should be reported to the American Radio Relay League (Tel. 860/594-0265, e-mail address: [hq@arrl.org](mailto:hq@arrl.org)) or similar organization. These organizations will coordinate with FCC should the situation warrant.

## CUTTING EDGE TECHNOLOGY

**Gas pumps can now automatically gas up your car!** A Swedish Company called *Autofill AB* has developed robotic gas station pumps. You simply pull up to the gas pump and insert a gas card into the slot. A robotic arm looks for the (spring loaded) fuel door and refills the gas tank in much the same way as in-flight refueling. A microchip installed in the fuel door tells the robot where the tank is located. The firm's U.S. subsidiary (Trans Robotics, Inc. of Jacksonville, FL) is testing the system in the United States.

■ **And Mobil is testing a new "Speedpass" electronic system** located at the gas pump. An electronic transponder turns the pump on when it reads a "Car Tag" placed in the lower corner of a car rear window or a "Key Tag" on your key ring. Eliminated is the necessity to "swipe" a credit card in the pump.

made for Radio Shack. IBM had been the exclusive PC supplier to Radio Shack since 1995.

■ 56-kbps modem makers have finally agreed on a common standard. But they will have to proceed without Motorola. **Motorola is shifting its Internet hardware emphasis from analog PC modems to high speed ASDL (asymmetrical digital subscriber line) modems.**

ASDL permits high speed Internet access over ordinary copper "twisted pair" lines. Cost for up to 256-kbps - ten times faster than a 28.8 modem - will be about \$40 month, \$65 for 512-kbps service.

Motorola has now joined the ASDL consortium (which includes Microsoft, Compaq, Intel and the Baby Bells) to develop a new telephone based standard. Motorola also has put up their Huntsville, Alabama (230,000-sq. ft.) analog modem group facility up for sale.

It is beginning to appear that when the smoke clears, **home Internet access of the future will be by either high speed cable or ASDL**. Both technologies play off of existing infrastructure, but there are more telephones than cable TV hookups - and an ASDL modem is cheaper. That is not to say that cable penetration is not significant; about 65 million homes are on cable TV. Microsoft is deeply involved in both cable and telephone access. The browser war is about to head to set-top boxes.

■ Digital TV to be received on standard PC screens. **Intel is testing a prototype DTV receiver card, that when inserted into a computer slot allows reception of digital TV.** The card converts the standard TV interlaced display to the progressive scan system used by PC monitors.

■ **IBM has unveiled an experimental super-fast computer chip that operates at 1000 MHz** - three times faster than the Intel's 333-MHz top-of-the-line. The chip will enable the use of real time full motion video on the Internet. Intel has a 64-bit processor on the drawing board, due next year, that will also achieve speeds above 1000 MHz.

■ Spokane-based **Egghead Software, Inc., is the first national chain to shut down all of its stores in favor of selling over the Web.** It probably will not be the last. Online software sales are expected to increase twenty-fold within three years

## EMERGING COMMUNICATIONS

■ **According to research firm Frost & Sullivan, the future of telecommunications is "bundling up" -- or offering a wide variety of services.** Supercarriers AT&T, Sprint and MCI Worldcom are all working on it. Consumers - and especially businesses - will be able to do "one stop" telecommunications shopping.

■ Commercial phone calls over the Internet are on the way! **"Level 3 Communications" plans to build the first nation-wide fiber optics Internet-based local and long-distance telephone network.** The Denver-based firm is a new company started with \$3 billion in cash by former managers of MFS Communications which was sold to WorldCom, Inc. for \$14 billion. Like fax messages, packet switched digital telephone calls sent over the Internet cost only pennies on the dollar (about 70% less) as compared to being routed over the regular public switched telephone network (PSTN). Several other firms are also working on implementing Internet telephony.

■ **Get ready for the super set-top box!** AT&T has decided the best way to enter the local residential phone service market is through TV cable rather than telephone wires. It is working on a cable-telephony deal with TCI, the nation's biggest cable operator. Look for a big AT&T investment in the "@Home" network. The \$100 billion local telephone market is four times the size of the cable TV market.

## COMPUTER & INTERNET NEWS

■ Radio Shack stores will no longer be selling the IBM line of personal computers. **Tandy Corp. signed a long-term contract with Compaq Computer Corp.** to market a line of Presario PCs specially

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(to \$1.3 billion) according to research firm, Jupiter Communications. At one time, Egghead had a nationwide network of 200 stores and 2,500 employees.

**New Internet rules took effect in China on January 1, 1998.** Chinese citizens are now subject to \$1,800 fines and loss of Internet access for "condoning regional separatism" or "splitting the nation" - such as promoting independence for Taiwan. Other offenses include online subversion, leaking state secrets, manufacturing and publicizing harmful information and pornography and computer hacking. All Chinese Internet users must register with the police. Strangely Hong Kong, although now a part of China, is not affected by the new rules because it was promised autonomy when it reverted back to Chinese rule on July 1, 1997.

**The ABC, CBC and NBC television networks are creating Internet sites for their affiliates.** They will serve as the entry point for PC users accessing local TV sites. ABC Local net, CBS-now, and the NBC Interactive Neighborhood all provide links to their local stations.

**An Indian tribe in Idaho, the Coeur d'Alenes, are running a U.S.-based \$1 million weekly lottery over the Internet.** They say they are legal since gambling on Indian reservations is regulated by tribal law and the 1988 federal Indian Gaming Regulatory Act. This is the same law which permits Indian tribes to establish casinos on their land, with the consent of their home-state governments. The Coeur d'Alene say that they have permission from Idaho and that all transactions take place on their servers located on tribal land. The lottery is managed for the Coeur d'Alene tribe by a subsidiary of Executone Information Systems. Several states have been trying to shut down their operation - so far without success. Supposedly, according to the U.S. Constitution, Indian tribes exist as sovereign governments. Check out: <<http://www.uslottery.com/>>

**The doctor is "in." For \$195.00, you can get a medical consultation on the Web.** "Patients" fill out a questionnaire and submit it to the medical specialist they choose. The MediXperts area on the Virtual Medical Center sends you a password via email with which to access your multi-page medical report within two to five days. The specialist explains treatment options, answers specific questions and pro-

vides suggested treatment. According to the site, "The reports do not form part of medical records and do not impact insurability." ...and "No need to wait for an appointment or spend money on travel" The site says they are not practicing medicine - merely giving out information. Check out: <<http://www.medicconsult.com>>

## WASHINGTON WHISPERS

**Cyberjournalist scoops traditional media from the safety of the Web.** The initial reports of President Clinton's alleged affair with a White House intern were first posted online. A story that was too hot to handle by the recognized media found its way first onto the unregulated Internet where rumors and innuendo are rampant and a way of life.

A big controversy is now raging as to whether the Net may be a sanctuary against libel. Some journalists are furious that they are legally held accountable to the rules of libel, slander and defamation -- and strictly web publishers may not be. They are more thought of as neighbors gossiping over the electronic fence.

The pioneering newshound is Matt Drudge whom critics say publishes unedited, unverified and politically motivated slanders. Actually the print and television media had the story but got cold feet about publishing it. Newsweek pulled the story at the last minute.

Drudge, a 31-year old Washington, DC transplant who operates out of his Hollywood apartment, broke the story of the taped conversations between Ms. Tripp and Monica Lewinsky on Saturday, January 17 on his <http://www.drudgereport.com>. The following morning, Web newsgroups everywhere were reposting the story and buzzing about it.

Television commentators, not wishing to be legally liable for an unsubstantiated rumor, simply credited the Drudge Report as their source. By Wednesday, the print media began covering the "Clintern" scandal. It was clearly a case of the Web gossip tail wagging the news media dog.

Drudge (some call him "Dredge") gets much of his insider stuff from readers who fill-in-the-blank submission box posted at his website -- with confidence guaranteed. It sort of reminded me of how Dick Bash, KL7IHP obtained the FCC's supposedly secret ham radio license questions back in

the early 1980's from readers who returned "feedback cards" inserted in his manuals.

The Drudge Report has become a choice depository for "leaks," many of which appear to be true. His only income appears to be from America Online who pays him a meager salary to make his report available to AOL subscribers.

Anyone can be a publisher on the Internet where expectations of accuracy are less. To even the competitive pressure, the traditional media is now considering using the Internet as their initial outlet for breaking news. Drudge's days of freewheeling reporting may be coming to an end, however. He is now a media celebrity and has appeared on NBC's Today show, the NBC Nightly News with Tom Brokaw and Larry King Live. Matt Drudge has even been interviewed by the Fox network for his own "real" news show.

**Electronic blocking of Internet content is not being considered by the FCC.** At least not yet. FCC Chairman Bill Kennard said that the "V-chip" is clearly aimed toward broadcast television and not the Internet. The V-chip is enables viewers to block display of all programs with a common rating.

TV set makers have been mandated by Congress to have the V-chip in half of new sets by July and in all sets one year after that. But it does not look like it will happen since industry is having trouble agreeing on technical and ratings standards.

Sen. John McCain (R-Ariz.) says he intends to introduce a bill that requires schools that use federal money to restrict access to indecent Web sites. The FCC has agreed to administer federal subsidies totaling hundred of millions of dollars to get the nation's schools, libraries and rural areas hooked up to the Net.

**The General Accounting Office, the U.S. Government watchdog, has established "FraudNet" to facilitate reporting of allegations of fraud, waste, abuse or mismanagement of federal funds.** Their e-mail address is: [fraud.osi@gao.gov](mailto:fraud.osi@gao.gov) A fill-in-the-blank report form is also on the Web at <http://www.gao.gov/fraudnet>

**You will be able to find out how much it will cost you to make a telephone call from a phone booth or a pay phone such as in a hotel or airport prior to making the call under new rules adopted by the FCC.** The price disclosure requirement gives consumers the

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opportunity not to place calls from phones with high rates. The FCC has received thousands of complaints from consumers about exorbitant pay phone fees. Callers will now be able to get the price of the phone call by simply pressing a button, such as the pound key. All public phones must comply with the new reporting requirement by July 1, 1998.

■ **The FCC's new fiscal year budget calls an increase of \$26,463,000 over the FY-1998's \$186,514,000 - but no increase in personnel. The Commission will still be authorized 2,105 full time staffers. The bulk of the increase covers FCC headquarters relocation expenses to move to "The Portals," mandatory increases in employees' salaries and certain contract services and \$6.7 million to insure that the FCC's information technology will work properly during the transition to the year 2000. Certain enhancements will also be made to the National Call Center (1-888-CALL-FCC) operations.**

■ **The FCC's scheduled move to "The Portals" seems to be opposed by practically everyone except the former GSA who signed the lease. The proposal to move the FCC's Washington, D.C., headquarters has also created a stir on Capitol Hill and the U.S. Department of Justice has been asked to investigate the matter.**

It has been reported in the national news media that a Tennessee developer with close personal ties to Vice Pres. Al Gore contributed more than \$1 million to the 1996 Clinton-Gore campaign. The contributions were allegedly made after the developer leased \$400 million worth of space at The Portals, an office building in SW Washington, D.C., where the FCC is scheduled to move by this year. A Gore spokesman said the Vice President "...had absolutely nothing to do with the FCC's decision to move to The Portals building or with the selection of its developers."

## AMATEUR RADIO

■ **The FCC is now taking applications from those interested in purchasing narrowband (5 kHz) channels in what used to be the 220-222 MHz ham band. It was reallocated to business interests in 1988. Auction winners will be authorized to conduct either fixed and mobile operations. The sale begins May 19, 1998.**

■ **There are now 15 VECs (volunteer**

**examiner coordinators)** left. The Koolau Amateur Radio Club which coordinated ham license examinations in Hawaii has dropped out.

■ **The first module of the International Space Station (ISS) has been completed and is ready for launch. The cargo module has been taken to Russia's Baikonur cosmodrome and a June 30 launch is planned. It was originally scheduled for a November 1997 launch, but had to be postponed when Russia fell behind on completion of the second module due to financing problems. The space station is a joint project of Russia, the U.S., the European Space Agency, Canada and Japan. The various modules will be assembled in space. The first crew -- two Russians and an American -- are planned to live on the ISS beginning in early 1999. An amateur radio station is to be part of the on-board equipment.**

■ **American amateurs soon will not need to apply for reciprocal licenses in order to operate during short visits to most European countries. While an official announcement still may be a few weeks away, it's been learned the U.S. request to participate in the European guest license arrangement has been approved. Similarly, most European hams visiting the U.S. no longer will have to submit FCC Form 610A, Application for Reciprocal Permit for Alien Amateur Licensee.**

Approval of the U.S. request came in late January at a meeting of the CEPT Radio Regulatory Working Group (WGRR), in Groningen, The Netherlands. The European Radiocommunications Office (ERO) has been instructed to officially notify the FCC of the decision approving U.S. participation.

The following is the exact wording from the January 26-30, 1998 WGRR minutes: "Matters concerning radio amateurs - A request from the USA to join T/R 61-01 had been circulated to administrations and comments from several administrations were received by the ERO. All administrations sending comments agreed with the participation, but there was one proposal with regard to the data to be included in the table. WGRR approved the application of the USA and determined the contents of the table. ERO will inform the FCC about the decision of WGRR."

Last September, the U.S. State Department applied for U.S. participation in the European Conference of Postal and Telecommunications Administrations (CEPT) Amateur Radio licensing system.

A holders of a CEPT license can operate in CEPT-participating countries without having to apply for a reciprocal license.

The State Department's action came at the urging of the ARRL that the U.S. take advantage of the CEPT Recommendation T/R 61-01 arrangements and issue a license that would be recognized by CEPT-participating administrations and would be valid for brief visits.

Also last fall, the FCC proposed amending the Amateur Radio rules to make it easier for hams holding a CEPT license or an *International Amateur Radio Permit* (IARP) to operate during short visits to the US.

Under the soon-to-be-implemented arrangement, a U.S. Technician license would be recognized as a CEPT Class 2 (VHF-only) license, with full privileges above 30 MHz. Holders of Tech Plus through Extra tickets would be given a CEPT Class 1 license, with full privileges on HF and VHF. Novice licensees would not be eligible for a CEPT equivalent license since most CEPT countries don't offer a license of this type.

Once the ERO formally advises the FCC of the decision, the FCC must complete the steps to implement the participation before CEPT licensing can become effective. "We've been urging the Commission to do this since 1991," said ARRL Executive Vice President David Sumner, K1ZZ. "Now that CEPT has given the green light, we hope the FCC will step on the gas." (ARRL Bulletin)

■ **Fernando, LW8DJZ reports that major changes have been made to the CW requirement in Argentina. Effective Jan. 20, 1998 the CNC (National Communications Commission) has eliminated their 10 and 15 wpm telegraphy examination. (Resolution 50/98) Argentina has five Amateur Radio license classes:**

**Initial (VHF/UHF) Class:** All privileges above 50 MHz. Holders get "AZ" prefix.

**Novice Class:** 5 wpm CW exam. HF voice privileges on 3.6 and 28 MHz.

**Intermediate Class:** 7 wpm CW exam. HF voice privileges on 1.8, 3.6 and 7 MHz. (Previous regulations required 5 wpm for this class.)

**General Class:** No additional CW proficiency required. (Previous regulations required 10 wpm.) HF voice on 1.8, 3.6, 7, 14, 18, 21 and 28 MHz.

**Superior Class:** No additional CW proficiency needed. (Previous regulations required 15 wpm.) HF privileges same as General plus 10 and 24 MHz.

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## FCC ACTS AGAINST HAM EQUIPMENT CAPABLE OF RECEIVING CELLULAR PHONE BANDS

The FCC is taking a hard look at amateur radio equipment that can be modified or reprogrammed to receive Part 22 Domestic Public Cellular Radiocommunications Service (cellular telephone) frequencies.

W5YI has learned that, as part of that initiative, the FCC's Equipment Authorization Division last summer issued a citation to Yaesu Musen Co., Ltd. of Tokyo, Japan. The FCC's citation asserts that Yaesu's Model FT-50R dual-band HT contains "...a scanner which can receive, or be readily altered by the user to receive, cellular telephone frequencies ...a violation of Section 302(d) of the [Communications] Act." According to the FCC, "Readily being altered by the user" includes modifications such as adding or clipping jumper wires, and programming through a personal computer."

The Commission asked Yaesu for an explanation and asked how Yaesu intended to correct this situation. The FCC staff also ordered Yaesu to stop importing and marketing the FT-50R HT.

Manufacturers usually design radios with a basic framework that they can tailor to comply with the legal requirements of the intended country of sale. The end result is that the many transceivers and scanners can be modified to one degree or another, although how easy it is to perform those changes varies from unit to unit. Using a search engine reveals a number of Internet sites posting "how-to" modification instructions for various manufacturers and models.

According to the (two volume) "Radio/Tech Modifications" books published by Artsci, Inc., of Burbank, CA, it appears that the features of most major brands of amateur and CB radios and scanners can be enhanced to some extent.

Artsci's Web site (<http://www.artscipub.com>) claims "Modifications are presented that increase the radio's frequency transmit and reception coverage. Many of the modifications will allow a radio or scanner to monitor cellular phone calls." Online charts indicate the modifications that are possible ...including, for some units, enabling receive or two-way operation between CB and 10-meters, VHF business band and the 824-849/869-894 MHz cell-phone band segments.

The *Radio/Tech Modification* books are updated yearly. The latest Edition 10A contains information on ICOM, Kenwood transceivers, and AOR, Regency, Radio Shack and Uniden scanners; 10B covers products by ADI (Premier), Alinco, Radio Shack, Standard, Ten-Tec, Uniden Yaesu, CB, and others. An accompanying dealer list claims that the Artsci books are available at most U.S. radio equipment stores. The *Radio/Tech Modifications* books cost \$19.95 for each volume.

W5YI has obtained a copy of Yaesu's defense, prepared by communications attorney John J. McVeigh (also Advanced Class, KD4VS). McVeigh responded to the citation by denying that the Model FT-50R violates FCC requirements. McVeigh made the following points:

- 1.) Any modification of the FT-50R "...would demand technical skills and implements far beyond that possessed by the average person." The two Cellular Service band segments are locked out as required by §15.121 and can not be easily restored.
- 2.) The Rule prohibiting listening to the radio spectrum "...impermissibly infringes upon the rights of the public under the First Amendment to the United States Constitution." Yaesu pointed out that the cornerstone of the FCC's power to regulate the use of the electromagnetic spectrum is that the airwaves belong to the people at large. "A ban on certain scanning receivers denies to a significant segment of the population access to certain channels of communication and the ability to receive information that those channels may convey."
- 3.) The FCC granted Yaesu an equipment authorization for the FT-50R which "...signifies that the Commission has determined that the equipment has been shown to be capable of compliance with the applicable standards..."
- 4.) The grant of an FCC Equipment Authorization carries with it certain procedural due process rights including prior issuance of an *Order to Show Cause* and a hearing. "Yaesu waives none of its legal rights, and Yaesu will insist on the full measure of legal protection to which it is entitled."
- 5.) The Cellular Service employs frequencies formerly used by TV channels 70 to 83 "...and the sound portion of an older television set can perform quite handedly as a cellular-communications monitor."
- 6.) Cellular telephones themselves contain the ability to scan and are more adaptable to that purpose than the Yaesu FT-50R.
- 7.) "The ban on cellular-capable scanners is an attempt to impose a total ban on access to publicly owned channels of communication in the name of enhancing what is really nonexistent -- or at best, extremely limited -- privacy." "If the conversants want privacy, it is up to them to move to private quarters."
- 8.) And rather than restricting the public's right of access to the airwaves, the FCC should require cell-phone makers to incorporate voice-scrambling.

According to FCC staffer Ray LaForge, the Yaesu FT-50R matter "is under investigation and still pending." LaForge told us that last Fall a meeting took place between Yaesu representatives and the FCC at the FCC Lab in Columbia, MD. He also said that the FCC "...is waiting for Yaesu to propose technical recommendations to address the problem. The ball is in their court," he said. When asked if other radio equipment firms were under investigation, LaForge confirmed that they were and that the investigations are "in various stages." He declined to name the firms.

Yaesu attorney McVeigh told us that Yaesu designed the Model FT-50R in total good faith to meet FCC requirements, and that his client is confident on the merits of its case.

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- Amateurs in the United Kingdom now have a new LF ham band. Effective Friday, January 30<sup>th</sup>, the UK's Radiocommunications Agency (same as our FCC) approved the 136 kHz band for use by all Class "A" (code proficient) licensees. Amateurs are permitted to run one watt ERP between 135.7 and 137.8 kilohertz -- a bandwidth of only 2.1 kHz. This is the so-called CEPT (Conference of European Post and Telecommunications) band that is generally available to European radio amateurs. Permitted modes are CW, phone, RTTY, Data, Fax and slow-scan ATV. The present 73 kHz LF band will only be available to UK amateurs until June 2000.

It looks like the **Radio Society of Great Britain will be publishing a new amateur radio magazine**. The RSGB has purchased the title of "Ham Radio Today" from Nexus Special Interest Publications. The society also publishes their "RadCom" journal. (From RSGB)

- The Wireless Institute of Australia (WIA) reported that **Masura Ibuka, co-founder of Sony Corporation died in Tokyo on December 19, 1997 at age 89**. "As a young man, Ibuka was an enthusiastic radio amateur, which led him to study electrical engineering at the Waseda University, where he graduated in 1933." He was responsible for introducing the transistor into Japan in 1952. Ibuka and Akio Morita introduced their first transistor radio in 1955 under the Sony brand. A "pocket-sized" radio followed in 1957; the world's first transistor TV set in 1959 and the first solid-state VCR in 1961.

The WIA also believes that **Australia has the world's oldest amateur**. Harry Angel, VK4HA celebrated his 106<sup>th</sup> birthday on December 14<sup>th</sup>. (From WIA)

## PRIVATIZATION OF WEB NAME REGISTRATIONS

*U.S. proposes international policy body to run the net*

The United States wants to change the way Internet names and addresses (technically called "domain names") are handled. In short, Uncle Sam wants to get out of the address business.

The current domain-name system is operated by Virginia-based Network Solutions, Inc. (NSI), through a contract with the U.S. government's National Science Foundation. NSI has now assigned more than 1.5 million Internet addresses. And for the last two years, it has charged \$100 each to rent a two year spot on the Web.

The Dept. of Commerce's National Telecommunications and Information Administration plan is to establish a non-profit, private sector corporation controlled by a international policy board.

The NTIA plan differs with that proposed by the Internet Council of Registrars (CORE) -- 90 companies in 23 countries which currently govern the net. CORE has signed up 88 companies to act as registrars for seven new domains. Their supervising Council of Registries would be based in Geneva, Switzerland.

The U.S. version to have only five competing hand-picked firms registering an additional five domains -- a total of eight.

According to NTIA, the U.S. goal is to move to private sector management of Internet names and addresses in a "...way that maintains the stability of the Internet, that is competitive, encouraging innovation and maximizing individual freedom". No matter which plan gets adopted, individual web surfers are not likely to see much difference. Features of the NTIA proposal include:

- competition among five firms registering Internet domain names.
- adding up five new gTLDs (generic top-level domain names) to the current three -- ".com," ".org" and ".net". The five new domains are .web, .arts, .store, .firm and .nom (for personal Web sites.)
- separating "naming" (assigning text addresses) from "numbering" (administering the database of IP numbers.) Registrars would assign the "names" and the new policy corporation would handle the database.
- management of the Internet addresses would be overseen by a coordinating body that is representative of Internet users from all parts of the world.
- the new non-profit corporation would be "balanced to fairly represent the interests" of Internet registries, registrars, the technical community, and commercial, private, and non-profit Internet users.
- registrars -- those who provide registration of domain names -- must perform "wide open admission of any entity who meets specified minimal criteria."

The NTIA "green paper" proposal, released January 30, is intended to encourage discussion. The short comment period closes in 30 days. NTIA said that they were "open to changes" and hoped that a consensus can be found. After modifications to the plan are made, implementation would begin in the fall.

Under the NTIA proposal, the U.S. Government would continue its close involvement with the Net during a two year transition period (to September 30, 2000) "...to assure stability until the new policy making corporation becomes established."

The proposals are an outgrowth of the Clinton administration's report, "A Framework for Global Electronic Commerce, which was released July, 1997.

At that time, President Clinton directed the Commerce Department to seek ways to privatize, increase competition in, and promote international participation in the domain name system to reach the full potential of electronic commerce.

Persons can view the proposal on the NTIA Web at: <HTTP: www.ntia.doc.gov>. Comments can be e-mailed to dns@ntia.doc.gov. NTIA is the advisor to the White House on domestic and telecommunications issues.